



**Cabinetmaking
(CM)**
Architecture and Construction

Skilled and Technical Sciences Contests

State Qualifying Conference
Contest Information

State Qualifying Event: Yes

National Contest: Yes

Participation: Individual

Contest Description

This competition requires the building of a small cabinet from materials and drawings supplied. Competitors are expected to read the drawings and lay out and cut the parts using a table saw, laminate trimmer, hand drill, hinge boring machine and various hand tools. The parts must be accurately assembled, sanded and adjusted to tolerances specified by the judges.

Skills Addressed

Contestants should be prepared to do the following:

- Safety and PPE (safety glasses at all times)
- Material layout ("optimization of material")
- Manufacture:
 - Use of biscuit and pocket hole joinery.
 - Use router to detail edges.
 - Use of jigsaw and/or band saw for radius cuts.
 - Safe table saw setup and use.
 - Setup and use of the miter saw in a production environment (stops), i.e. cross-cutting.
 - Proper gluing of all components and using mechanical fasteners.
 - Easing edges.
 - Preparation of finished product.

Overview

Contestants will have 2 hours to build a small laptop tray with drawer. They will need to know how to use a biscuit joiner, table saw, pocket hole system, miter saw, routers, band saw and/or jigsaw and small hand tools. Students will cut, drill, detail, route, glue, assemble and sand all component parts.

Material and Equipment Provided

1. Tools Required for Contest (provided by Organizers; ratios are suggestions):
 - a. Table saw – 1 saw:5 student ratio
 - b. Power miter saw – 1:5 ratio
 - c. Pocket hole system – 1:4 ratio
 - d. Biscuit joiner – 1:4 ratio
 - e. Template created by contest coordinator for cove on the bottom of the sides.
 - f. Router table (or hand router) with 1/4" roundover bit with bearing (min 2)
 - g. Band saw and/or jigsaw (min 2)
 - h. Nail guns, 18 or 23 gauge for drawer box construction – 1:5 ratio

2. Materials Required for Contest (provided by Organizers; based on 24 contestants):

- a. 3/4" Plywood, 4' x 8' sheet - 12 sheets
- b. 1/2" Plywood, 4' x 8' sheet - 2 sheets
- c. 1/4" Plywood or Melamine, 4' x 8' sheet - 2 sheets
- d. Pocket hole screws, 1-1/4" (20) per student
- e. Finish nails, 1-1/4" (3D) (20) per student
- f. Drawer Front screws, 1" (2) per student
- g. Yellow wood glue with brushes.
- h. Wood filler, match to wood.
- i. Biscuits #20 - (20) per student

3. Facility Requirements for Contest

- a. Workbenches/tables
- b. Chairs
- c. Electrical outlets (approximately 8 at 15 amps each)
- d. Extension cords (for routers and jig saws)
- e. Air Compressor (or portable air compressor with manifold)

Each Contestant Will Need to Provide

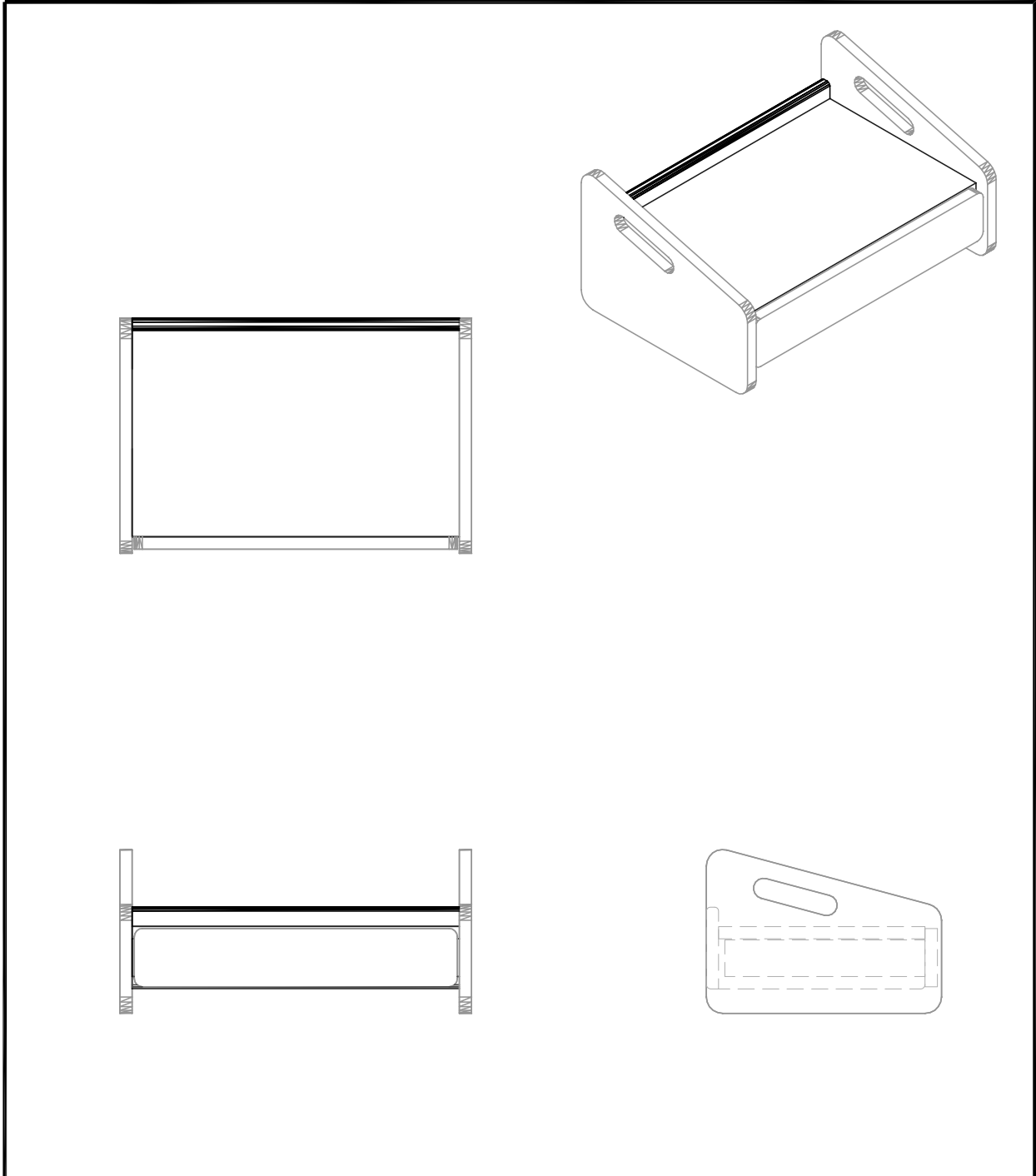
Required; bring 1 of each unless otherwise noted. Ensure all cutting tools are properly sharpened.

1. Required Items:

- a. Tool box (no buckets)
- b. Nail apron
- c. Clear safety glasses
- d. Dust mask
- e. #2 pencils, sharpened - qty 2
- f. Tape measure (1/16" graduations)
- g. Calculator
- h. Square: speed, try or combo
- i. Utility Knife
- j. 13oz (or larger) curved claw hammer
- k. 1/16" or 1/32" nail set (min 1)
- l. Backsaw
- m. Screw driver with interchangeable bits
- n. #2 square drive bit, 6" long
- o. Cordless drill motor/driver w/bits and charger
- p. 24" parallel jaw/quick grip bar clamps (qty 2)
- q. Block Plane (low angle recommended)
- r. 10 mill bastard file
- s. Sanding block for 1/4 sheet
- t. Sheets and paper (80, 120, & 220 grit)
- u. Cabinet scraper
- v. 1" flexible putty knife
- w. Airhose, 25' long
- x. Pliers

2. Optional/Permitted items:

- a. Air nailer, 18 or 23 gauge
- b. Cross cut saw
- c. Drill bits (1/16" to 3/8")
- d. Compass
- e. 1 set (4 pc) wood chisels 1/4" - 1", sharpened
- f. Rubber or Wood Mallet
- g. 6" "C" clamps (qty 2)



SkillsUSA

SkillsUSA Illinois
State Qualifying Conferences

CABINETMAKING
LAPTOP TRAY
DRAWING

DATE:	2019	JOB #:	CM
DRAWN BY:	AK	SCALE:	NTS
DWG. NO.	3		